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AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph 0031 with the following amended paragraph.

Figure 4 is a flow diagram 140 showing steps in programming preferred embodiment storage cells, e.g., cells 102 in an array 100 of Figure 1 or individual cells 102 such as are shown in the cross section of Figure 2. When a write cycle starts in step 142, the current state reference signal 114 is checked in step 144 at the differential sense amplifier 108 to determine if any programming margin remains. If not, in step 146 the chip/array 100/circuit 120 being modified/over-written is at end of life and must be replaced. Otherwise, if programming margin remains, then continuing to step 148, the reference level is shifted, e.g., by programming the dummy cell 124. The reference level check step 144 and shift step 148 may be done simply by programming the dummy cell 124 and checking the programmed dummy cell 124 against a known previously programmed location for a opposite response by the differential sense amplifier 108, i.e., that the previously programmed location indicates that it is unprogrammed. Once the reference level has been shifted in step 148, essentially, all of the cells have been unprogrammed; not erased but, <u>unprogrammed</u> ~~uprogrammed~~. Next, in step 150 the first location identified for programming is selected for overwriting. Programming begins in step 152, e.g., pulsing the selected cell(s) with a write voltage. In step 154 the contents of the selected cell(s) are checked to determine if the selected cell(s) has(have) been programmed. If not, returning to step 152, writing to the selected location continues. Optionally, the saturation determination step 144 may be done or repeated at this step 154, e.g., if the selected cells have not been programmed after a selected number of write iterations. Once the selected cells are determined to have been written in step 154, if more cells remain to be programmed in step 156, a next location is selected in step 158 and written in step 152. This continues until all of the cells have been selected in step 158 and written in step 152, i.e., no cells remain in step 156. Optionally, cell contents checking step 154 and location checking steps 156 may be swapped, doing a write pass

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through all of the locations in step 156 before checking in step 154 and following with another pass, if necessary.

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